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ABSTRACT

Using data gathered from citizens in six Maryland counties, this teacher's handbook was developed to convert research findings into usable materials for the study of work values in secondary schools. The purpose of the handbook is to expose the student to various work attitudes, their sources, and their relationship to occupational choice and adjustment in an objective manner. This handbook consists of three chapters, and each is preceeded by (1) a set of questions as preorganizers for the teachers, and (2) suggested concepts for study with the students. Chapter 1 describes the development of an instrument measuring values associated with work; chapter 2 describes the comparative study between vocational and non-vocational high school seniors, parents, and teachers on selected work values; chapter 3 explains the differences of attitudes toward work between groups of students categorized on the basis of parental occupations. The appendix includes the Maryland Work Value Inventory (MWVI) and a key which identifies each item in terms of which work value scale it evaluates. Suggested strategies for use of the handbook are included in the introductory material. (Author/BM)

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TEACHERS' HANDBOOK FOR EXPLORING A CLUSTER OF WORK VALUES OF STUDENTS, PARENTS AND TEACHERS, ON THE BASIS OF RESEARCH FINDINGS

by

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OVERVIEW

Introduction

The contents of this Teachers' Handbook on Work Values were based on data gathered from the citizens of six Maryland counties. The cooperating counties are identified by the coded numbers which appear on the map located on the cover and in Figure 1. Other counties were invited to participate and proper procedures for obtaining clearance to pursue studies therein were completed; however, permission was not granted. As the map indicates, the most populated counties did not participate and, unfortunately, these were the counties with the greatest involvement in career education.

Those who cooperated with this survey study were required to distribute and collect the Maryland Work Value Inventory as described in Chapter I. Participants filled out the inventory in school or at home anonymously and returned it to a central collecting point.

Purpose

The purpose of this handbook was to convert research findings into useable materials for the study of work values in secondary schools. It was assumed that when students and teachers could make reference to findings of a study, they could be more objective and that some of the pitfalls of subjectivity in the classroom could be

avoided. Having an objective base for studies provides a feeling of security for both the student and teacher. Hopefully as students would involve themselves with these studies they would develop a subjective awareness of their own work values.

These studies would enable students to make personal choices and possibly to lead to a tentative set of work values. Alternatives must be provided which would 1) be prized or cherished by the student, 2) have meaning to the student as when the consequences of work values are understood, and 3) be freely selected from a variety of clearly defined work values.

Design of Teacher Handbook

This handbook consists of four chapters and each is preceeded by 1) a set of questions as preorganizers for the teachers, and 2) suggested concepts for study with the students. The Appendix includes the Maryland Work Value Inventory (MWVI) and a key which identifies each item in terms of which work value scale it evaluates.

Each chapter has research data which may be duplicated and made available to student; the MWVI may also be copied. Some quantities are available from the writer.

Suggested Strategies for Use of the Handbook

Generally, the teacher begins the studies of work values with a background lecture on the importance of work values using examples of prominent contemporary people

in music, science, art, technology, etc. Although the work values in this study are limited to eight, a wide range of work values in varying combinations and degrees may be mentioned. (See Chapter I.) The teacher should become thoroughly informed as to the contents of the handbook, develop handout materials and transparencies of the statistical tables. Following the presentation of the background information the teacher may use some of the methods described below.

The Socratic Method. The main role of the teacher becomes an "information or opinion seeker," and facilitator, and the student's role becomes an opinion giver, elaborator and clarifer.

The Phillips 66 Method. The class is divided into six groups. One minute is used to identify a group leader and a secretary. One of the questions provided herein is given to the class. Six minutes are used for the small group discussions. Following this each group leader reports the findings of the group.

The Inquiry Method. The student discovers knowledge from the findings of the study. Following this method the teacher:

1. Provides an atmosphere of psychological safety and openness.
2. Prepares a lesson which would include an overview of the entire study and prepare a schedule of how and when topics will be studied.

3. Provides a lesson with ideas from each chapter to act springboard material for inquiry. Charts and tables from this study could be duplicated and distributed to students.

4. Prods students, acts as a facilitator (with discretion) to explore their responses and aids students in formulating alternatives.

5. Asks students to make open statements and to protect them from unfair criticism and demonstrates a respect for student opinions.

6. Asks students to repeat statements to a point of clarity and summarizes points for students.

7. Asks questions which lead to alternative ways of solving the problem when inhibition is encountered or when issues are deadlocked.

8. Requires students to do outside studies on the topic of work values and specific categories of Holland's occupations and provides guidance to carry out this task.

When undertaking the teaching of work values the teacher should keep in mind that:

1. Work values tend to be a product of our experiences. One has to choose for oneself and integrate these into the pattern of thinking about careers.

2. The findings of this study are not to be used as dogma; that is to say that data from large groups of people do not eliminate individual differences.

3. The development of work values is a personal and life-long process. As the world and individual situations change, so do the work values of people.

4. If young people are to begin to develop work values, they need to acquire information and guidance through some very serious thought processes.

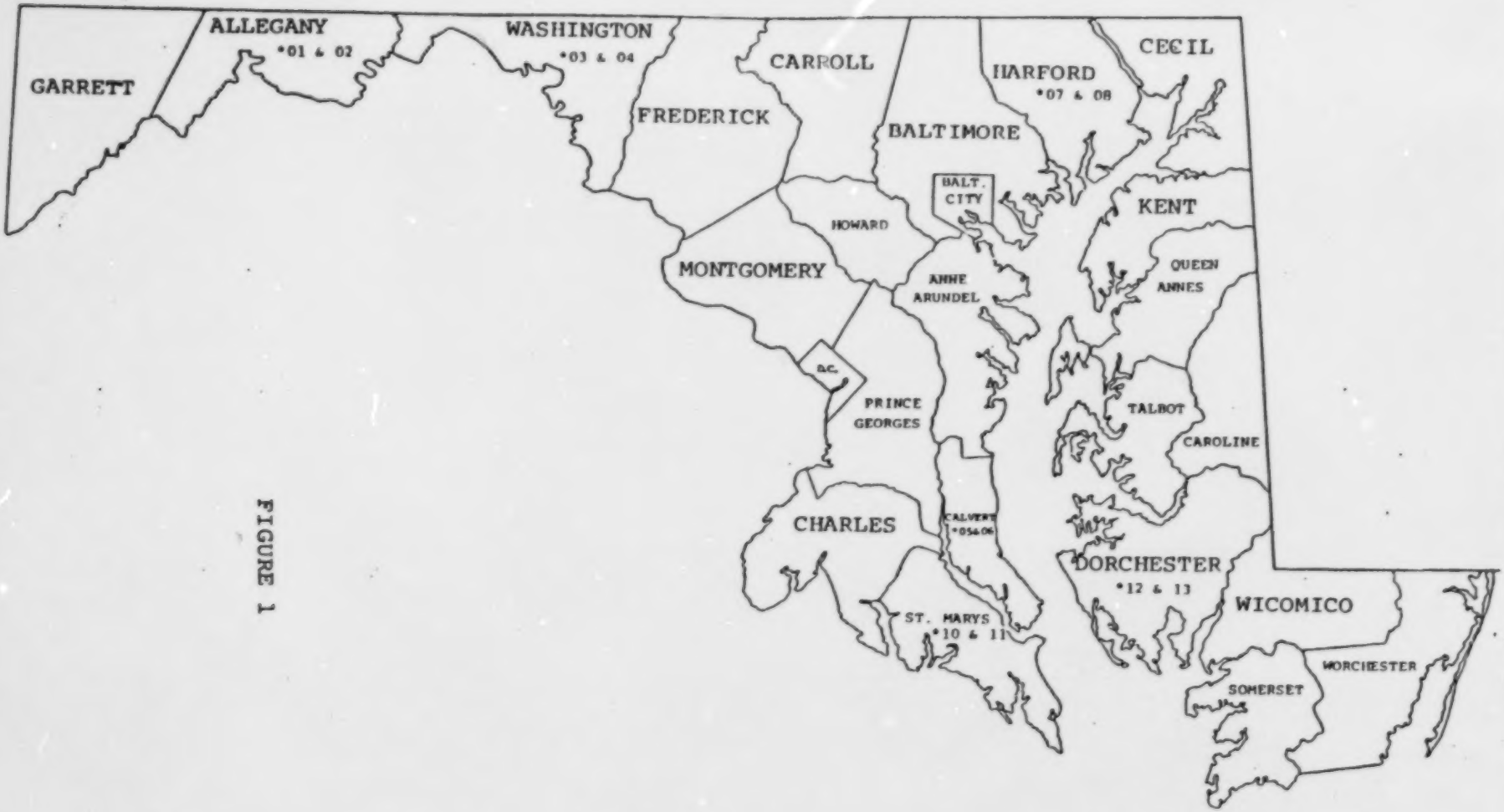

GARRETT
ALLEGANY
*01 & 02
WASHINGTON
*03 & 04
FREDERICK
CARROLL
BALTIMORE
HARFORD
*07 & 08
CECIL
BALT. CITY
KENT
HOWARD
MONTGOMERY
ANNE ARUNDEL
QUEEN ANNES
D.C.
PRINCE GEORGES
TALBOT
CAROLINE
CHARLES
CALVERT
*05&06
DORCHESTER
*12 & 13
WICOMICO
ST. MARYS
*10 & 11
WORCESTER
SOMERSET

FIGURE 1

Sample Questions and Preorganizers for Chapter I

After studying Chapter I the teacher should be able to:

1. describe and define the eight scales of the Maryland Work Value Inventory (MWVI)
2. describe the design and structure of the items
3. describe the tests which were applied to the MWVI
4. describe the various types of data gathered by using the MWVI in pilot studies
5. lead a discussion with students by using some of the questions listed below.

<u>Questions</u>

1) A. What are some circumstances and conditions that may cause people to change their work values?

   B. Give a few examples.

2) A. Define the work value of Personal Satisfaction.

   B. Give an example of an expression or ideas that would reflect this work value.

   C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

3) A. Define the work value of Skill Development and Utilization.

   B. Give an example of an expression that would reflect this work value.

   C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

4) A. Define the work value of Altruism Toward Society.

   B. Give an example of an expression that would reflect this work value.

C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

5) A. Define the work value of Altruism Toward Employer.

B. Give an example of an expression that would reflect this work value.

C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

6) A. Define the work value of Status Achievement.

B. Give an example of an expression that would reflect this work value.

C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

7) A. Define the work value of Economic.

B. Give an example of an expression that would reflect this work value.

C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

8) A. Define the work value of Avoidance Behavior.

B. Give an example of an expression that would reflect this work value.

C. Give an example of an occupation which you think would provide you an opportunity to realize this value.

9) A. Give an example of some myths about work.

B. Give some idea about work values that we have not touched upon.

The Maryland Work Value Inventory is provided in the Appendix. The scales and the item numbers belonging to it are listed below.

Personal Satisfaction: 1, 9, 13, 19, 21, 29, 33, 36, 42, 49, 51, 57.

Economic: 4, 7, 12, 16, 23, 27, 31, 38, 43, 47, 53, 59.

Altruism Societal: 3, 11, 18, 30, 37, 46, 56.

Altruism Employer: 6, 22, 32, 44, 54.

Skill Development and Utilization: 2, 8, 17, 26, 35, 39, 45, 48, 58.

Status: 10, 15, 25, 28, 40, 50, 55.

Avoidance Behavior: 5, 14, 20, 24, 34, 41, 52, 60.

Altruism is the total of Altruism Societal and Altruism Employer.

CHAPTER I

THE DEVELOPMENT OF AN INSTRUMENT MEASURING VALUES ASSOCIATED WITH WORK

The Maryland Work Value Inventory

Literature strongly supports the idea that the meaning, value and nature of work is a dynamic changing process and that these characteristics are imparted by changes in technology, economics, social and familial forces and are informal, pursuasive, and subject to the interplay of ideas. Within this milieu, the ability to determine how various populations of people feel about work should make a major contribution to the educator's study of work adjustment (Borow, 1973; Ginzberg, 1963; Kazanas, et al , 1975).

The wide range of attitudes held by students, about an infinite array of work-related factors, demands the use of many kinds of instruments to elicit new and meaningful knowledge. Research designed to break out the complex patterns of attitudes and expectations toward work could provide base line data for meaningful studies in school. These studies would not impose any particular set of work values on an individual but would make an effort to expose that individual to a variety of work attitudes and their effects on the individual's career development.

This paper provides a description of a research effort to develop such an instrument--its unique design, its application, its efficacy and supportive statistics.

Developing the Maryland Work Value Inventory

The MWVI is the second of two instruments developed for a project which was partially supported by federal funds through the Maryland State Department of Vocational/Technical Education. The first instrument used was designed around concepts from the literature and previous research concerned with a number of American work ethics (Super, 1962; Kazanas, et al, 1975). One hundred ten items were extracted from significant literature; most of these sources are presented in the reference. The items were administered to eighty subjects and the resulting data were treated with factorial analyses statistics using the BMDO3M computer program. The factor loadings and variances are reported in a final report to the funding agency mentioned above (Mietus and Gnidziejko, 1976). This instrument was used in a study involving two thousand students; the results were also reported in the same document. The results of the study together with the insights gained from the experience strongly indicated a need to probe deeper and to investigate a more varied number of factors.

The writer, with his assistant,decided to construct an instrument which would yield information of an etiological nature, questioning underlying reasons for attitudes toward work and capable of eliciting data which could not be obtained because of previous instrument limitations.

The available instruments (usually on a Likert scale) require a response to a statement, as for example: "Work should provide me with a sense of satisfaction." The only information gained is the relative strength of agreement or disagreement

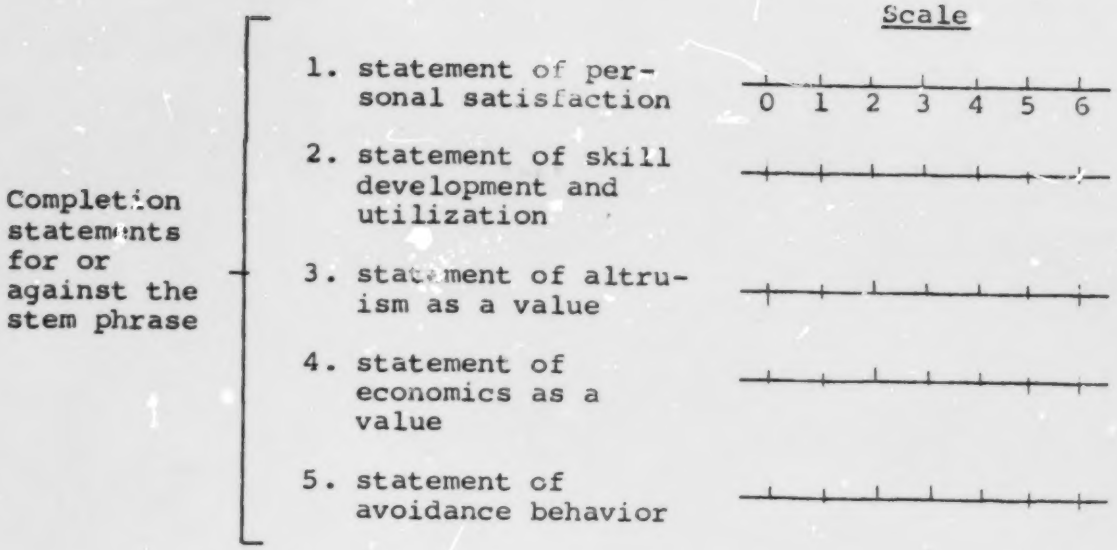
with the statement. The underlying reason for a person's response is not elicited. Other item designs such as forced choice value scales do not overcome this weakness. The items in the Maryland Work Value Inventory (the second instrument) are unique in that they are etiological in design. They are constructed with a declarative phrase as a stem followed by phrases of completion which reflect selected reasons for a person's choice and a scale for designating the intensity of feeling for this choice. Each choice belongs to one category of seven work ethics or subtests. The MWVI was used not only for purposes of obtaining research data but also for subsequent studies in schools.

Item Structure

The stem of each item is a work concept in the form of a declarative phrase. It is followed by five completion statements about which the respondent is asked to indicate his or her feeling on a seven-point scale. The five completion statements are validated reasons which reflect categories of selected values. A panel of ten judges Q-sorted the statements into seven subtests.

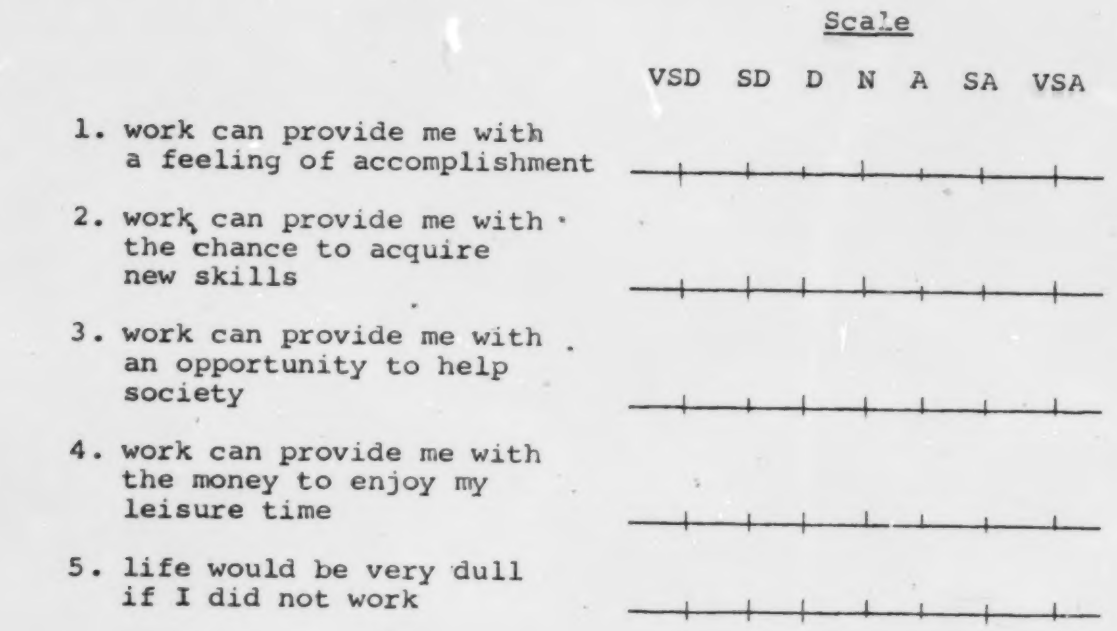
Model:

A. Item stem in the form of a declarative phrase.


Scale
Completion statements for or against the stem phrase
1. statement of personal satisfaction
0 1 2 3 4 5 6
2. statement of skill development and utilization
3. statement of altruism as a value
4. statement of economics as a value
5. statement of avoidance behavior

Example:

A. I Should Work Because:


Scale
VSD SD D N A SA VSA
1. work can provide me with a feeling of accomplishment
2. work can provide me with the chance to acquire new skills
3. work can provide me with an opportunity to help society
4. work can provide me with the money to enjoy my leisure time
5. life would be very dull if I did not work

In the above model the first item is one of twelve measuring on the Personal Satisfaction Scale, the second measures on the Skill Development and Utilization Scale, the third measures on the Altruism Toward Society Scale, the fourth measures on the

Economic Scale and the fifth measures on the Avoidance Behavior Scale.

The numeric scale was used to quantify the terms Very Strongly Agree, VSA, 6; Strongly Agree, S.A., 5; Agree, A, 4; Neutral, N, 3; Disagree, D, 2; Strongly Disagree, S.D., 1; and Very Strongly Disagree, VSD, 0.

Initially seventy-five completion statements provided data for seven clusters of work value categories. The content of the items and choices were deduced from concepts about work which were abstracted from the literature by the project team. Content and construct validity was performed as described by a team of judges. These categories or subtests are designated as: 1) economic (Econ.), 2) altruism toward society (Altso.), 3) altruism employer (Altem.), 4) status achievement (Stat.), 5) skill development and utilization (Skdu.), 6) personal satisfaction (Persat.), and 7) work as avoidance behavior (Avoid.)

Stability and Reliability of the MWVI

Four exploratory studies using high school students were conducted. The sensitivity of the instrument in detecting differences of attitudes between students of varying subjects was tested. For example, it was found that cosmetology students and vocational practical nursing students had significantly different profiles on the subtests. Likewise, educators and people in business and industry generated different profiles. With encouraging results from small exploratory efforts reliability studies were undertaken.

Forty male high school vocational education students were used as subjects. They completed the MWVI within thirty-five minutes which also included administrative instructions. Four weeks later the instrument was administered again to the same group. Since the instrument did not require the student's name and since the freedom not to participate was offered to the students, it was not possible in this study to identify or analyze the instruments in pairs. Data from thirty-five instruments from the first administration and thirty-five from the second were tested for significant differences between means, using the SPSS program with Univac systems. This statistical program generated the means S.D., S.E., and "t" ratio for each subtest.

The summary of these data is presented in Table I. The findings were taken to support an acceptable degree of stability of the instrument since statistically there were no significant difference (α = .05) between the means derived from all subtests.

In another exploratory study, forty-five secondary vocational education seniors were pre and post tested. To assure anonymity, they were asked to code their instruments with a symbol (identifiable by them only) so that the researchers would be able to evaluate their performance on each instrument. Having an x and y score for each subject, the Pearson Product correlation statistic was used to treat the data, yielding the results summarized in Table II.

The correlation between the data from the pre test x and the post test y yielded the lowest (r = .79) numerical value for the Altso subtest. Using the table values of r for significance of correlations (Winer, 1962), it was found to be significant at the .05 level. Since the other correlations were higher, it was mathematically sound to say that all the scales correlated significantly at the .05 level and it was decided that the instrument was suitable for purposes of this project.

Table III is a summation of intercorrelations of sub-scales. These data were generated by the University of Maryland Univac computer system using the SPSS program. The output included Pearson Correlations and levels of significance of F ratios. The correlations between scales ranged from -.121 to .510. The scales of Avoid. and Altso. have a correlation which indicates that different factors are being measured (r_t = -.121). The highest correlation (r = .510) was between the scales of Altso. and Altem. The F ratio for these two tests was 6.1 which exceeded the table value of F, 4.35 for 1 and 20 d.f. (Winer, 1962). The data was interpreted to indicate that these scales tended to be evaluating similar factors. All other scales correlated with a lower degree of intensity; however, not significantly so. Acknowledging some of these inherent weaknesses, the decision was made to accept the level of differentiation of the MWVI.

Validation of the MWVI

A Q-sort technique was used to gain further confidence that the modified constructs and items within each subtest had an acceptable degree of validity. Three English teachers, two psychologists, one English supervisor and two industrial arts professors cooperated in the allocation process. Seventy-five items, each on a slip of paper, were given to the above persons and they were instructed to allocate the items into the categories of work as a value for: 1) skills development, 2) personal satisfaction, 3) economics, 4) status, 5) altruism toward society, 6) altruism employer, and 7) work as avoidance behavior. Many of the items were from the first instrument which was subjected to factorial analysis and it was decided that seventy-five items were a satisfactory number to begin with.

Analyses of results from the allocation process indicated that six items were categorized differently, thereby indicating weak discrimination. Suggestions were forthcoming and the items were rewritten to the point of agreement between the judges in terms of language and construct content for each of the subtests. Further pilot studies were made and the final form of the MWVI included sixty items.

In summary, the MWVI has met the criteria of construct validity. The allocation and Q-sort process performed by judges provided evidence that the subtests were discriminately different from one another and that the items represented the constructs they were intended to measure. Statistical data tended to show that internal consistency and reliability were satisfactory and that the subtests discriminated amongst

different sample populations within and between subtests.

Pursuant to conducting a large-scale study with the revised MWVI within twelve schools in six counties, statistical data are available for the following populations: 1) students (N = 1,800), vocational and academic, ages 16,17, 18 and 19, by sex and whether they worked or not; 2) parents (N = 203) by sex, age, and seven categories of occupations (professional, managerial, skilled, unskilled, self-employed, unemployed and retired); 3) teachers (N = 100), by academic and vocational specialists, years of teaching, and whether they worked in another occupation prior to teaching. For the above groups the following statistics are catalogued: means, standard deviations, standard errors, skewness, kurtosis, median, range and variances. This information is available from the writer.

The populations used were all from the State of Maryland. The MWVI and the findings of this study are being provided to vocational and social science teachers of participating schools for use in career education studies.

While this diminished the value of the MWVI as a research instrument for use within the school systems of Maryland, it is hoped that other researchers would be encouraged to use it for comparative studies.

TABLE I

TEST, RE-TEST DATA FOR STABILITY AND RELIABILITY
USING 35, ELEVENTH GRADE VOCATIONAL EDUCATION STUDENTS

	ITEMS	MEAN	S.D.	S.E.	T. VALUE
TEST PERSAT.	12	64.37	9.00	.48	
RE-TEST PERSAT.	12	64.16	9.10	.46	.32 *
TEST ECONOMIC	12	63.99	9.90	.52	
RE-TEST ECONOMIC	12	63.87	10.00	.66	.15 *
TEST ALTSO.	7	34.55	6.46	.34	
RE-TEST ALTSO.	7	34.75	6.45	.31	.44 *
TEST ALTEM.	5	25.66	4.16	.22	
RE-TEST ALTEM.	5	25.70	4.21	.20	.51 *
TEST SKILL D.	9	48.90	6.91	.36	
RE-TEST SKILL D.	9	48.93	7.48	.35	.06 *
TEST STATUS	7	35.76	6.38	.33	
RE-TEST STATUS	7	36.19	6.14	.29	.99 *
TEST AVOID	8	38.49	6.71	.35	
RE-TEST AVOID	8	38.46	7.20	.45	.06 *

Critical level for .05 with 33 d.f. = 2.04.

*No significant differences at the .05 level.

TABLE II

TEST, RE-TEST CORRELATIONS FOR EACH SUB-SCALE OF THE MWVI

SUBTEST	N SUBJECTS	N ITEMS	CORRELATION COEF.**
PERSAT.	45	12	.89
ECON.	45	12	.91
ALTSO.	45	7	.79
ALTEM.	45	5	.80
SKILL D.	45	9	.78
STATUS	45	7	.81
AVOID	45	8	.80
TOTAL	45	60	.86

Critical value for .05 level with 43 d.f. =.29

**All correlations significant at the .05 level.

TABLE III

INTER CORRELATIONS AMONG SUBTESTS OF THE MWVI

	PERSAT.	ECON.	ALTSO.	ALTEM.	SKILL D.	STATUS	AVOID
PERSAT.	1.000	.221	.430	.390	.411	.022	.100
ECON.	.221	1.000	.160	.460	.309	.460	.332
ALTSO.	.430	.160	1.000	.510*	.364	.342	-.121
ALTEM.	.390	.460	.510*	1.000	.401	.384	-.001
SKILL D.	.411	.309	.364	.401	1.000	.270	.171
STATUS	.022	.460	.342	.384	.270	1.000	.230
AVOID	.100	.332	-.121	-.001	.171	.230	1.000

F ratio for 1 and 20 d.f. at .05 level = 4.35.

*Significantly different at .05 level.

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Sample Questions and Preorganizers for Chapter II

Prior to working with the suggested questions provided, the teacher needs to review the definitions of each work value structured in the MWVI with the students. This will enable the students to be more articulate in responding to questions and to engage in discussions.

1) A. This study was limited to eight work values. Name them.

   B. Name a contemporary person, his or her occupation and the work values you think he or she may be realizing.

2) Name some work values not mentioned in this study.

3) What were some reasons for the writer of this study to limit the number of work values studied?

4) What events or circumstances make it difficult for some people to develop a clear set of work values?

5) In your opinion, would problems be created for some students if teachers and students held different sets of work values? Explain your answer.

6) Why ~~do~~ could you ~~prefer~~ infer that groups of vocational students tended to prefer the work values of Skill Development and Utilization, Status, and Economic over non-vocational students and teachers?

7) Would you expect that some vocational students would completely avoid certain occupations because they strongly hold to these work values? Explain in which kinds of jobs do you think they would feel uncomfortable?

8) What could be the possible reason why non-vocational students preferred the work values of Personal Satisfaction and Altruism Societal to a significantly higher degree than vocational students?

9) Some groups of students differed remarkably from others in terms of work values. What specific events or cues enabled you to see this? Do your personal friends give you some indication of having different work values?

10) In this study, it was found that female students preferred work values of Personal Satisfaction, Skill Development and Utilization and Altruism Societal over male students. Will this in your opinion cause girls to choose different careers than boys? Give examples to illustrate this.

11) In this study, it was found that males preferred the work values of Status and Economics significantly higher than females. Make a show of hands if you think this would hold true in this class also. Provide some examples of jobs that would tend to meet the elements of these work values.

12) What reasons can you give for the fact that the students in this study differed significantly from their parents on the work values of Skill Development and Utilization, Status and Economics?

13) If you were a personnel manager of a large company, which set of work values (amongst other factors) would you want your employee to have? How would these work values differ if the company activities differed?

14) What reasons can you give for the fact that students rank ordered their work values in the same way as their parents on all scales?

15) What reasons can you give for the fact that students scored in the same rank order as their parents but differently from their teachers?

16) Make a list of occupations showing which strongly contribute to the realization of the eight work values used in this study.

17) Make a list of the work values of this study. Next to these, list Holland's six personality characteristics that would be compatible with each.

CHAPTER II

A COMPARATIVE STUDY BETWEEN VOCATIONAL AND NON-VOCATIONAL HIGH SCHOOL SENIORS, PARENTS AND TEACHERS ON SELECTED WORK VALUES

Introduction

Contemporary high school students are exposed to more information about the world of work than any other previous generation. They are exposed to career concepts which are infused in countless school programs and to bewildering, conflicting information from the mass media. Popular media programs extolling technological advancement and hope for the future are soon followed by shattering reports of restraints on and failures of technology. Events such as these, undeniably have an affective effect on students and it would be reasonable to say that many young people experience difficulty in coping with and in aligning their career aspirations with the real world of work. The sobering warnings presented by the conservationists and environmentalists diminish the assumption that nuclear energy will solve the future power needs. Work stoppages due to the fuel, petroleum and natural mineral shortages signal an era of scarcity not only of goods but also jobs.

Images of successful people with their accompanying life styles abound, while simultaneously, the highest percentages of unemployed are younger people. Unfortunately, too many students find themselves in communities and in homes where disillusionment and frustration exist after a

life time of hard and honest work. Economic discrepancies show that there are those assured of comfort and survival without work, while others are experiencing deep feelings of distress, and hopelessness caused by a troubled economy buoyed by obsolescent institutions of work. These and many other turbulent forces are persuasive; they interplay with ideas in the minds of students, leaving the young people on a continuum of being unaware of their affective regard toward work to knowing in clearly defined terms. Since personal experience in the flux of life has the potential for affective change, it is reasonable to assume that there could be those whose uninformed, vague and distorted ideas about work prevent the crystalization of values about work. From this malaise, it can be concluded that the need exists for the proper clarification, examination and augumentation of restructuring students' attitudes toward work. Certainly if the values of work are not internalized, it becomes very difficult for the individual to achieve self direction for career decisions.

The meaning of work and the values associated with work are related to an individual's job satisfaction. Furthermore, if teachers and parents contribute to students' formation of attitudes and values, then it is important that these similarities and differences be studied. (Kazanas, Gregor, 1975) The intent of these studies would not be to impose any particular set of work values or attitudes on an individual; instead, the intent would be to expose the student to various work attitudes their sources and

relationship to occupational choice and adjustment.

Purpose

The purpose of this study was to conduct a survey incorporating selected work values and to generate meaningful data and information which could be used for study in social science and vocational education courses. It was also designed to study the interaction of a combination of work values not previously investigated. The problems investigated and the findings presented in this paper are a part of a larger study funded by the Maryland State Department of Vocational Technical Education.

Problems Investigated

The problems investigated in this study were to determine if there were significant differences between scores derived from eight value scales of the Maryland Work Value Inventory, the MWVI, Bradbard, Mietus in (Mietus, 1977) which measured selected work values between the following subjects:

1. Senior high school vocational and senior non-vocational groups of students.
2. Female and male high school seniors.
3. Students and teachers.
4. Students and parents.

Methodology

Two schools from six counties representing four different geographic regions in the State of Maryland

were sources of subjects for this study. Senior high school students, including 923 males and 899 females, 203 parents and 100 teachers, provided useable data upon responding to the Maryland Work Value Inventory. This inventory was tested in four pilot studies to determine its level of validity, reliability and stability. (Mietus, 1977) The content and constructs of the items were validated by the use of ten judges, the Delphi and Q-sort technique. After the completion of pilot studies using the test-retest design, all scales of the MWVI yielded Pearson correlation coefficients significant beyond α = .05 level to support a satisfactory degree of reliability of the MWVI. Low and negative correlation coefficients between scales indicated that the scales were, in fact satisfactorily, measuring different factors. The rationale, the design of the items and the supportive statistical data from validation studies were described in other documents. (Mietus, 1977)

A definition of the eight scales and the concepts that the items were designed to measure, is provided below.

1. Personal Satisfaction (PERSAT) - the items were designed to measure the relative extent to which people value work that provides a feeling of satisfaction and/or fulfillment.
2. Economic (ECON) - the items were designed to measure the relative extent to which people value the economic benefits received from the production of goods or providing services.

3. Altruism-social (ALTSO) - the items were designed to measure the relative extent to which people concern themselves unselfishly toward ~~their employer or organisation.~~ SERVING SOCIETY.

4. Altruism-employer (ALTEM) - the items were designed to measure the relative extent to which people concern themselves unselfishly toward their employer or organization.

5. Altruism (ALT, combination of ALTSO and ALTEM) - the items were designed to measure the relative extent to which people concern themselves unselfishly toward the welfare of both society and their employer.

6. Skilled Development and Utilization (SKDU) - the items were designed to measure the relative extent to which people value work that enables them to gain an increased understanding and development of skills.

7. Status (STATUS) - the items were designed to measure the relative extent to which people value work that can provide an opportunity to enhance their image, prestige and social position.

8. Avoidance (AVOID) - the items were designed to measure the relative extent to which people value work to avoid unpleasant consequences made possible by <u>not</u> working.

Treatment of Data and Findings

After completion of the survey, data were collected from twelve schools, all of which had unequal numbers of subjects. From this larger sample, various numbers of cases were randomly dropped off to produce samples of equal size. These samples from different schools were pooled to form one group of either vocational, non-vocational, parents or teachers. Since an equal number of subjects was pooled, the Maximum F ratio described by Hartley was used to determine if the differences between the variances from several samples indicated whether they came from populations differing in variance or whether they could have arisen from a common population. The computed F max in all cases was lower than the critical value; therefore, the homogeneity of variance was accepted and the assumptions for the F ratio tests were met.

The University of Maryland Computer Service Center provided the use of the UNIVAC 1108 and the treatment of data with the use of the SPSS program. This program generated the summary data depicted in Table 1 and other data necessary for the total study. For purposes of presentation, but not calculation, the data presented were rounded to two decimal places. Viewing Table 1, it is evident that the differences of the magnitude of the means appear to be rather small; however, the effects of large degrees of freedom and small differences between SE contribute to generating significant differences between

TABLE I

COMPARATIVE DATA BETWEEN VOCATIONAL AND NON-VOCATIONAL HIGH SCHOOL SENIORS

Variable	N	Mean	S.D.	S.E.	F	D.F.	T
PERSAT							
Voc	802	64.36	9.23	.48	1.18	1404	2.91*
NonVoc	602	66.41	8.51	.50			
SKDU							
Voc	802	50.45	6.81	.40	1.03	1404	2.85*
NonVoc	602	48.89	6.90	.36			
ECON							
Voc	802	64.88	9.85	.52	1.24	1404	2.92*
NonVoc	602	62.71	9.74	.50			
ALTEM							
Voc	802	34.55	6.46	.34	1.24	1404	1.27
NonVoc	602	35.23	7.20	.42			
AVOID							
Voc	802	38.49	6.71	.35	1.05	1404	1.06
NonVoc	602	39.04	6.54	.38			
ALTSO & ALTEM							
Voc	802	60.11	9.48	.49	1.10	1404	1.70
NonVoc	602	61.04	9.95	.58			
STATUS							
Voc	802	36.90	6.37	.33	1.09	1414	2.40*
NonVoc	602	35.75	6.12	.36			
ALTSO							
Voc	802	25.50	4.15	.22	1.07	1404	1.98*
NonVoc	602	26.22	3.99	.23			

*Significant beyond .05 level
Value for rejection at .05 level = 1.96

means as sustained by appropriate t ratios.

The data provide evidence that high school seniors who pursued vocational studies scored significantly (α = .05) higher means on the scales of Skill Development and Utilization, Economic and Status, than did non-vocational students. There were no significant differences on the scales of Altruism, Altruism Employer and Avoidance. Non-vocational students (who did not at any time pursue vocational courses) scored significantly higher (α= .05) on the scales of Personal Satisfaction and Altruism Social. Thus the data from these subjects support a discontinuity of values. This finding will be used as a basis for value clarification studies in the participating schools.

The second problem was investigated by using equal numbers (700) of male and (700) female high school seniors. Equal numbers were derived by randomly dropping cases from each population. With the use of the SPSS statistical computer program, significant differences between the means (α = .05) were calculated. It was found that the females scored significantly higher on the scales of PERSAT, SKDU and ALTSO. Data also provided evidence that males scored significantly higher (α = .05) scores on the scales of ECON and STATUS. No significant differences were found between the males and females on the scales of AVOID and ALTEM.

Of central interest to career educators who are involved with the project, were the findings of the third stated problem. Teachers and students generated different

patterns of values. Significant differences ($\alpha = .05$) were found where the students scored higher on the scales of SKDU, ECON and STATUS, whereas the teachers scored significantly higher on PERSAT and ALTSO.

Statistical data derived from students and parents indicated that the students scored significantly higher ($\alpha = .05$) than parents on the scales of SKDU, STATUS and ECON, whereas the parents did not score significantly higher than students on any scale. Upon ranking the student and parent scales on a continuum and applying Kendall's tau, it was found that there was a significant correlation between both groups. Accordingly, the data indicated that students closely reflected their parents' values and they departed from teacher work values.

Summary and Recommendations

This study incorporated the development and use of the MWVI which was designed to assess the adherence of individuals to a unique combination of work value scales. Most of the scales were broadly defined in terms similar to other work value scales, however the questions and item structure were different. These differences produced a unique set of findings.

The data indicated that teachers held to a cluster of work values that non-vocational students hold to and a different set of work values that vocational students hold to. Vocational students tended to indicate a strong value for work which would enable them to employ the skills they

believed to possess and situations where they could develop these. They tended to appreciate status associated with meaningful work and financial remuneration. They were perpetuating the traditional cultural responsibility, i.e., to actualize and develop work skills, gain status and economic sufficiency.

For teachers and non-vocational students, financial remuneration was not significantly meaningful; however, the desire for work which provides personal satisfaction by contributing to the benefit of society was foremost.

Since the internal states of motivation for work were found to be different between vocational students and teachers, studies investigating the effects of these on achievement and affective differences need to be initiated.

Combined data from both male and female students followed the same rank order as established by parents; however, they were significantly higher. The hierachy of values ranked the same but with significantly different intensity. This strongly tends to indicate that studies need to be conducted on the discrepancies between what youth expects and desires with what the world of work can provide. Students need to know what adjustments are necessary and what compromises may be forthcoming in relationship to the jobs they will enter into.

Career education programs which provide occupational information without assisting the student in achieving self-understanding and how to cope with conflicting values are indeed avoiding a responsibility. Such programs may

be contributing to unrealistic expectations and aspirations. Several counties with sizeable federally funded career programs declined participation with this study on the grounds that work value clarification was too sensitive of an area for study. Fortunately this was not the prevelant attitude shared by all counties in the state of Maryland.

The findings of this study and the MWVI were forwarded to the participating schools for use in work value clarification studies. Hopefully such an intervention would be in the spirit of Maslow (1954) who wrote:

> ". . . the only way we know of preventing contamination of our perception of nature, of society, or of ourselves, by human values, is to be very conscious of these values at all times, to understand their influence on perception, and with the aid of such understanding to make the necessary correction."

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Sample Questions and Preorganizers for Chapter III

This chapter contains data and findings which were derived from questionnaires completed by students. They also provided the information relative to parental occupations. The students were categorized on the bases of parental occupations which to a large extent were similar to the schema used by the Dictionary of Occupational Titles. (See Chapter III Methodology.)

The teacher should study the text and plan various methods for delivering the factual and objective information. Also a review of the definitions of terms, Chapter I, and items for each scale of the MWVI should be conducted. The strategies used should consider the maturity and level of understanding of the student. A conducive classroom atmosphere of openness, honesty, acceptance and respect should prevail. Criticism and moralizing should by all means be avoided.

Questions

1) A. What kind of forces in our daily lives cause one to change his or her work values?

   B. Give some specific examples.

2) What reasons can you give for the following findings?

   A. Students from homes where a parent was a professional scored significantly higher scores than all other groups on the work values of Personal Satisfaction and Altruism Toward Society.

   B. On the bases of the items in the inventory scale for Personal Satisfaction and Altruism, make a

list of professions and cite some activities within each profession that contribute to the realization of these items.

3) What possible reasons can you suggest for the fact that in this study

   A. Students from homes where a parent was in a managerial occupation scored significantly higher than all other groups on the work value scales of Skill Development and Utilization and Avoidance Behavior?

   B. On the bases of the items in the inventory scale for Skill Development and Utilization and Avoidance Behavior, make a list of activities from managerial jobs that contribute to the realization of these items.

4) What possible reasons can you suggest for the fact that in this study

   A. Students from homes where parents work in skilled trades scored significantly higher scores on the work value scales of Economic and Status?

   B. On the bases of the items in the inventory scale for Economic and Status, make a list of occupational activities from skilled trades that contribute to these items.

5) What possible reasons can you suggest for the fact that in this study

   A. Students from homes where parents worked in unskilled jobs scored significantly higher on the scales of Altruism Toward Employer and Avoidance Behavior?

   B. On the bases of the items in the inventory scales of Altruism Toward Employer and Avoidance Behavior, make a list of occupational facts from unskilled jobs that relate to these items.

6) What possible reasons can you provide for the fact that in this study

   A. Students from homes where parents were unemployed scored significantly higher on the scales of Economic, Altruism and Status over students whose parents were in the professions and self-employed?

   B. On the bases of the items in the inventory scales for Economic, Altruism and Status, make a list of problems which may be caused by being unemployed.

CHAPTER III

DIFFERENCES OF ATTITUDES TOWARD WORK BETWEEN GROUPS OF STUDENTS CATEGORIZED ON THE BASIS OF PARENTAL OCCUPATIONS

Review of related research supports the idea that the meaning, the value and the nature of work are dynamic, changing processes impacted by changes in technological, economical, social and familial forces. These processes can be informal, pursuasive and subject to a complex interplay of ideas leading to the creation of a wide array of attitudes on the part of individuals. Within this complex milieu, a researcher must engage in reductionism, i.e., to work in a given time frame with selected factors soundly determined, and at best, to extract knowledge from only a part of the total phenomena. This survey study was conducted by using eight selected work value scales. The findings presented are a part of a larger study funded by the Maryland State Department of Vocational Technical Education.

Purpose

The purpose of this study was to obtain base line data on how secondary school seniors who come from homes differing in parental occupations feel about work. It was also the purpose to provide social science teachers and career educators meaningful facts to use as a basis for study in schools. However, the intent of the studies is not to impose any particular set of work values or

attitudes on an individual; instead the intent is to expose him or her to a wider variety of work values, sources of work values and their relationship to the process of occupational choice.

Problem

The problem under consideration was to determine what differences in scores, if any, existed between groups of students categorized on the basis of eight parental occupational groups and measured by eight work value scales.

Methodology

A large scale survey study was conducted within twelve schools and six Maryland counties. The Maryland Work Value Inventory (Bradbard and Mietus, 1977) was used to obtain data from 1,800 students, 203 parents and 100 teachers. The stability, validity and reliability of this instrument was reported in the document cited in the reference.

The MWVI scales and the categories of parental occupations used in this study are described below.

MWVI SCALES	PARENTAL OCCUPATIONAL CATEGORIES
1. Personal Satisfaction (PERSAT)	1. Professional
2. Economic (ECON)	2. Managerial
3. Altruism-social (ALTSO)	3. Skilled
4. Altruism-employer (ALTEM)	4. Unskilled

MWVI SCALES	PARENTAL OCCUPATIONAL CATEGORIES
5. Altruism (ALT, combination of ALTSO and ALTEM)	5. Self-employed
6. Skilled Development and Utilization (SKDU)	6. Unemployed
7. Status (STATUS)	7. Retired
8. Avoidance (AVOID)	8. Unknown

All data elicited by the MWVI was computerized and the statistics derived were the means (Table I), standard deviations, standard errors, skewness, kurtosis, median, range and variances. The treatment of the data incorporated the use of Fisher's "t" test for significant differences of the means of unequal groups (α = .05) and Kendall's test for significant differences of rank correlation (Table II).

Definitions

The MWVI has a cluster of items for each of the subscales defined below. Reviewing this inventory will provide insight into the underlying concepts of the scales and the factors of each scale. This inventory will be made available by the writer upon request.

1. Personal Satisfaction (PERSAT) - the items were designed to measure the relative extent to which people value work that provides a feeling of satisfaction and/or fulfillment.

2. Economic (ECON) - the items were designed to measure the relative extent to which people value the economic benefits received from the production of goods or providing services.
3. Altruism-social (ALTSO) - the items were designed to measure the relative extent to which people unselfishly dedicate themselves toward serving society.
4. Altruism-employer (ALTEM) - the items were designed to measure the extent to which people concern themselves unselfishly toward their employer or organization.
5. Altruism (ALT, COMBINATION OF ALTSO AND ALTEM) - the items were designed to measure the relative extent to which people concern themselves unselfishly toward the welfare of society and their employer.
6. Skilled Development and Utilization (SKDU) - the items were designed to measure the relative extent to which people value work that enables them to gain an increased understanding and development of skills.
7. Status (STATUS) - the items were designed to measure the relative extent to which people value work that can provide an opportunity to enhance their image, prestige and social position.

8. Avoidance (AVOID) - the items were designed to measure the relative extent to which people value work to avoid the unpleasant consequences made possible by not working.

Findings

Table I includes the means and number of the scores achieved by each group on each scale. Table II includes rank order data based on the calculated means for each group of students evaluated on the eight scales of the MWVI. The rank order is presented in the vertical columns and enables the reader to follow the analysis presented, and may also lend itself to class discussions, particularly by students in the schools from which the data was elicited.

The application of Fisher's "t" test to determine the significant difference (α = .05) between independent samples of unequal size yielded the following results.

The group of students whose parents were retired from an occupation scored significantly higher on all scales than did the Unskilled, Unemployed parental groups and that block of students who did not know what their parents' occupations were.

Excluding the Retired group from further consideration, it was found that students whose parents were in the professions scored significantly higher (α = .05) than did all groups on the work attitude scales of Personal Satisfaction, Altruism toward Society, and the combined

Altruism score including Altruism toward employer.

The students whose parents were in the Managerial occupations scored significantly higher than did all groups, excluding the Retired group, on the scales of Skilled Development and Utilization and Avoidance Behavior.

Students whose parents were in the Skilled occupations scored significantly higher than Professional and Managerial groups on the scales of Economic and Status. They also scored higher on the scale of Skilled Development than did the Unskilled, Self Employed and Don't Know groups.

Students whose parents were in the Unskilled group scored significantly higher scores than all groups except the Retired on the scales of Avoidance Behavior and Altruism toward the employer.

Students who reported that they did not know what their parents' occupations were scored significantly lower on all scales than did students from the Professional, Managerial and Skilled groups.

Students whose parents were Unemployed scored significantly higher scores on the scales of Economic, Altruism and Status than all groups except the Retired, Unskilled, Managerial and Skilled.

Conclusions

High school seniors categorized on the basis of parental occupations generated different profiles of values related to work. Their cognition as to what they

TABLE I

THE MEANS OF THE SUBTEST SCORES ON THE MWVI
AND CATEGORY OF PARENTAL OCCUPATIONS

MEANS

Category	N	PERSAT	ECON	ALTSO	ALTEM	ALT	SKDU	STATUS	AVOID
Professional	142	66.94	64.98	35.43	25.56	61.16	50.25	36.91	38.93
Mangerial	147	65.58	64.74	35.37	25.85	61.36	50.60	36.99	39.11
Skilled	623	65.57	65.04	34.82	25.78	60.67	50.24	37.05	38.97
Unskilled	368	65.09	65.34	34.55	26.15	60.69	49.95	37.02	39.25
Self-employed	49	66.84	64.76	32.74	25.47	53.03	50.10	36.79	38.79
Doesn't Know	42	55.05	64.12	31.91	24.12	54.62	48.18	35.88	36.84
Unemployed	51	65.15	65.83	35.37	26.15	61.49	50.15	37.56	38.76
Retired	67	68.31	67.10	36.12	26.59	62.82	51.61	38.67	39.72

TABLE II

THE RANK OF MEANS BASED ON THE SUBTEST SCORES OF THE MWVI AND CATEGORY OF PARENTAL OCCUPATIONS

RANK OF MEANS

Category	N	PERSAT	ECON	ALTSO	ALTEM	ALT	SKDU	STATUS	AVOID
Professional	142	2	5	2	6	4	3	6	5
Managerial	147	4	7	4	4	3	2	5	3
Skilled	623	5	4	5	5	6	4	3	4
Unskilled	368	7	3	6	2	5	8	4	2
Self-employed	49	3	6	7	7	7	7	7	6
Doesn't Know	42	8	8	8	8	8	5	8	8
Unemployed	51	6	2	3	3	2	6	2	7
Retired	67	1	1	1	1	1	1	1	1

expect from and find desirable about work varied from group to group. Students should be made aware of these variations so that they may expand and adjust their value systems to their career choices. The study of work values can lead to the reduction of disillusionment and frustration which is experienced by high school graduates preparing to enter the world of work.

The findings reported in this paper as well as others, were reported back to the schools which participated in this study. Social science and vocational educators hopefully will use the questions from the inventory, analyze each scale in terms of its factors and relate these to the findings obtained from each student group.

Administrative supervisors of the school systems that supported this study encourage social studies and vocational education teachers to use the findings in workshops in work motivation. A suggested procedure is to study the findings in relationship to various occupational roles and the various values that may be realized. Students could be assisted in making reasoned conclusions about aspirations and expectations they believe to be suitable for their career goals.

A follow-up study was planned for collecting reactions and comments from students. These should provide meaningful insights into a field which has received very little attention in vocational education.

APPENDIX A

ITEM KEY FOR MWVI

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The Maryland Work Value Inventory is provided in this Appendix. The scales and the item numbers belonging to it are listed below.

Scales and their Item Numbers

Personal Satisfaction: 1, 9, 13, 19, 21, 29, 33, 36, 42, 49, 51, 57.

Economic: 4, 7, 12, 16, 23, 27, 31, 38, 43, 47, 53, 59.

Altruism Societal: 3, 11, 18, 30, 37, 46, 56.

Altruism Employer: 6, 22, 32, 44, 54.

Skill Development and Utilization: 2, 8, 17, 26, 35, 39, 45, 48, 58.

Status: 10, 15, 25, 28, 40, 50, 55.

Avoidance Behavior: 5, 14, 20, 24, 34, 41, 52, 60.

Altruism is the total of Altruism Societal and Altruism Employer.

APPENDIX B

THE MARYLAND WORK VALUE INVENTORY

A) I should work because:

	VSD	SD	D	N	A	SA	VSA
1) work can provide me with a feeling of accomplishment							
2) work can provide me with the chance to acquire new skills							
3) work can provide me with an opportunity to help society							
4) work can provide me with the money to enjoy my leisure time							
5) life would be very dull if I did not work							

B) Work will provide me with a sense of accomplishment when:

	VSD	SD	D	N	A	SA	VSA
6) I am told by my supervisor or manager what a fine job I am doing							
7) I earn enough from a job to live comfortably							
8) I develop my skills to the fullest extent possible							
9) I feel a personal satisfaction from working							
10) I gain status in the field I choose to work in							

C) A job which offers me the opportunity to display my talents is important because:

	VSD	SD	D	N	A	SA	VSA
11) this will enable me to feel that I am making my best possible contribution to society							
12) I will make more money if given the opportunity to display my best talents							
13) I will feel personally fulfilled if I am able to do this							
14) if I am not able to do this, I will probably quickly become bored with work							
15) this is the best way for me to achieve prestige in the field I choose to work in							

D) Working is especially <u>enjoyable</u> for me when:

	VSD	SD	D	N	A	SA	VSA
16) I feel I am being appropriately rewarded for my efforts							
17) I feel I am improving my job-related skills							
18) I feel I am providing an important service to society							
19) I feel personal satisfaction from doing my work							
20) I feel I am not made to do 'unimportant tasks'							

E) For me, an important aspect of taking on challenging work is:

	VSD	SD	D	N	A	SA	VSA
21) the pride I will feel after taking on the challenge							
22) the contribution I will make to the organization by completing challenging tasks							
23) the economic rewards I may receive from taking on challenging work							
24) that this will enable me to avoid doing routine "non-challenging" work							
25) that completing such tasks will probably enable me to increase my status within the company							

F) I consider a job to be worthwhile when:

	VSD	SD	D	N	A	SA	VSA
26) it enables me to use my abilities							
27) it provides me with a reasonable pay and many fringe benefits							
28) it provides me with opportunities to gain status in the company							
29) it allows me to accomplish a lot, according to my own standards							
30) it enables me to make a contribution to society							

G) The benefit of having a job that I know will be permanent is:

	VSD	SD	D	N	A	SA	VSA
31) the financial security that is assured by permanent work							
32) the opportunity for me to make a long-term contribution to a company							
33) the satisfaction I will feel by knowing that I will always be working							
34) knowing that I will not have to be troubled with finding a job at a later time							
35) the chance I will have to develop my skills to the fullest extent possible							

H) An important kind of satisfaction that a job can provide me with is:

	VSD	SD	D	N	A	SA	VSA
36) the personal satisfaction I will feel after completing a days work							
37) the satisfaction of knowing I am making a contribution to society							
38) the satisfaction I will feel from being able to buy things I want with my earnings and savings							
39) the satisfaction I will feel by using my job-related skills							
40) the satisfaction I will obtain from a high level position in an organization							

I) I should be productive on a job throughout the day because:

	VSD	SD	D	N	A	SA	VSA
41) this is the best way for me to avoid boredom							
42) I find it personally satisfying to put in a full-day of work							
43) this is the best way for me to obtain salary increases							
44) my employer will benefit most from this kind of performance							
45) my job-related skills will improve fastest if I do this							

J) For me, an important aspect of job advancement is:

	VSD	SD	D	N	A	SA	VSA
46) the advancement in the contribution I can make to society							
47) the advancement in the financial benefits a job can provide me with							
48) the advancement in the skills I acquire							
49) the advancement in my satisfaction with work							
50) the advancement in my job position in the organization							

K) Being given extra responsibilities by my employer will be important to me because:

	VSD	SD	D	N	A	SA	VSA
51) being chosen over others for this work will be personally satisfying	/	/	/	/	/	/	/
52) being chosen for this extra work will help to eliminate the monotony of everyday work	/	/	/	/	/	/	/
53) extra pay may go along with these extra responsibilities	/	/	/	/	/	/	/
54) this will enable me to make a greater contribution to my employer	/	/	/	/	/	/	/
55) carrying out these responsibilities successfully may lead to a job-position advancement for me	/	/	/	/	/	/	/

L) An <u>important</u> job is one that will:

	VSD	SD	D	N	A	SA	VSA
56) enable me to make a contribution to society	/	/	/	/	/	/	/
57) give me a feeling of personal satisfaction	/	/	/	/	/	/	/
58) enable me to develop and use my skills to the fullest extent	/	/	/	/	/	/	/
59) offer me large financial rewards for my contributions	/	/	/	/	/	/	/
60) enable me to avoid doing the "little" jobs that others get stuck with	/	/	/	/	/	/	/

If you have any feelings that you wish to express about work, please do so by writing in the space provided below.

___Male ___Female (Check one)

Age _____

Are you presently taking courses in either the vocational or career education program at your school?

___Yes

___No

___Other (please explain) _____

_____

List the jobs you have held: _____

_____

_____

Are you presently employed? _____ If yes, what is your present job? _____

Parents' occupations (if known)

father _____

mother _____